

**STUDY OF SHORELINE CHANGE AND CONCEPT OF THE
MANAGEMENT TECHNIQUES IN SAMAS BEACH AND BAROS LAGOON
BANTUL REGENCY, SPECIAL REGION ON YOGYAKARTA**

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ABSTRACT

Shoreline change impacts on the environment such as setbacks and progress coastline. Shoreline setback impacts on the mangrove ecosystem changes, changes in landform coastal areas, and the loss of shelter and livelihoods of the people who use the coastal area. In addition, the progress of the coastline has an impact on the environment such as the disruption of coastal ecosystems and disruption of the flow of Opak's mouth river. The purpose of this research are : (1) Knowing coastlines undergoing changes in the period 2012-2014; (2) Knowing the natural factors that are more dominant effect on shoreline change; (3) Determine the direction of shoreline change management techniques in Samas's Beach.

The initial phase of the study conducted by survey method for determining the point of shoreline change. Point changes into account land use maps, geological maps and google earth image. The slope of the beach is measured at the point of shoreline change to determine the area of abrasion and sedimentation. The magnitude of changes in the coastline known based on the interpretation, digitization, delineation and calculation on google earth image in 2012-2014. Natural factors more dominant effect on shoreline change obtained from the statistical analysis of measurement data field following parameters: current speed, wave, and tidal. The amount shoreline change, natural factors that dominate the coastline changes, the condition of the existing diversion, and Spatial Kab. Bantul years 2010-2030 used as the basis for determining the direction and technical management of shoreline change at Samas Beach and Laguna Baros.

Based on the result, the rate of shoreline's change in 2012 – 2014 is +4,09 m/year, extensive change is +1145,71 m²/year, the percentage of coastline's change is 44,12% every year. Natural factors that influence changes in the coastline, the currents and waves. Based on the study and evaluation of shoreline change, the direction of the management techniques that can be applied in the study area 1) Mechanism and rehabilitation of mangrove forests by kind *Avicenniaceae* to the area immediately adjacent to the sea , and for the mainland areas with the type *Rhizophora* Sp density 10000 plants / ha; 2) Changes in the pattern of current flow of the river and ocean currents in the estuary Opak; 3) Addition of sediment in the western and southern regions Opak estuary.

Keywords: shoreline change, natural factors, concept of the management